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| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>                 DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>                 CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>   |   | ATTORNEY'S DOCKET NUMBER<br><b>APL-03-05-US</b><br>U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/581378</b> |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/CA2004/002025</b>   | INTERNATIONAL FILING DATE<br><b>30 NOV 2004</b> | PRIORITY DATE CLAIMED<br><b>3 DEC 2003</b>   |
| TITLE OF INVENTION<br><b>CRYO-PROTECTIVE AGENTS FOR MICROORGANISMS</b>  |   |  |
| APPLICANT(S) FOR DO/EO/US<br><b>SA LEE, T.</b>  |   |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |   |  |
| 1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.<br>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.<br>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.<br>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).<br>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))<br>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).<br>b. <input type="checkbox"/> has been communicated by the International Bureau.<br>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).<br>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).<br>a. <input type="checkbox"/> is attached hereto.<br>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).<br>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))<br>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).<br>b. <input type="checkbox"/> have been communicated by the International Bureau.<br>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.<br>d. <input type="checkbox"/> have not been made and will not be made.<br>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).<br>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).<br>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).<br>Items 11 to 20 below concern document(s) or information included:<br>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.<br>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.<br>13. <input type="checkbox"/> A preliminary amendment.<br>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.<br>15. <input type="checkbox"/> A substitute specification.<br>16. <input type="checkbox"/> A power of attorney and/or change of address letter.<br>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821-1.825.<br>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).<br>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). |   |  |

'AP9 Rec'd PCT/PTO 02 JUN 2006'

PTO-1390 (Rev. 07-2005)

Approved for use through 3/31/2007. OMB 0651-0021

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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|---|--------------|---|---------|---|----|
| U.S. APPLICATION NO. (If known, see 37 CFR 1.51)<br><div style="font-size: 2em; font-weight: bold;">107581378</div>   |              | INTERNATIONAL APPLICATION NO.<br><div style="font-size: 1.2em;">PCT/CA2004/002025</div> |         | ATTORNEY'S DOCKET NUMBER<br><div style="font-size: 1.2em;">APL-03-05-US</div> |    |
| 20. Other items or information:<br><div style="font-size: 1.2em; font-family: cursive;">Change of Name document (2 pages)</div>   |              |   |         |   |    |
| The following fees have been submitted  |              |   |         | CALCULATIONS      PTO USE ONLY  |    |
| 21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.492(a))..... \$300   |              |   |         | <div style="font-size: 1.2em;">\$ 300</div>                                   |    |
| 22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c))   |              |   |         | <div style="font-size: 1.2em;">\$ 200</div>                                   |    |
| If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0<br>All other situations.....\$200   |              |   |         | <div style="font-size: 1.2em;">\$ 200</div>                                   |    |
| 23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.492(b))<br>If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority.....\$100<br>International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB.....\$400<br>All other situations.....\$500 |              |   |         | <div style="font-size: 1.2em;">\$ 500</div>                                   |    |
| <b>TOTAL OF 21, 22 and 23 =</b>   |              |   |         | <div style="font-size: 1.2em;">1000</div>                                     |    |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)).<br>The fee is \$250 for each additional 50 sheets of paper or fraction thereof.   |              |   |         | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| Total Sheets  | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole number)           | RATE    |   |    |
| - 100 =   | /50 =        |   | x \$250 | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).   |              |   |         | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| CLAIMS  | NUMBER FILED | NUMBER EXTRA  | RATE    | \$  |    |
| Total claims  | 20 - 20 =    | 0   | x \$ 50 | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| Independent claims  | 3 - 3 =      | 0   | x \$200 | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)   |              |   | + \$360 | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| TOTAL OF ABOVE CALCULATIONS =   |              |   |         | <div style="font-size: 1.2em;">\$ 1000</div>                                  |    |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.  |              |   |         |   |    |
| SUBTOTAL =  |              |   |         | <div style="font-size: 1.2em;">\$ 1000</div>                                  |    |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).   |              |   |         | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| TOTAL NATIONAL FEE =  |              |   |         | <div style="font-size: 1.2em;">\$ 1000</div>                                  |    |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property  |              |   |         | <div style="font-size: 1.2em;">\$ 0</div>                                     |    |
| TOTAL FEES ENCLOSED =   |              |   |         | <div style="font-size: 1.2em;">\$ 1000</div>                                  |    |
|   |              |   |         | Amount to be refunded:  | \$ |
|   |              |   |         | Amount to be charged  | \$ |

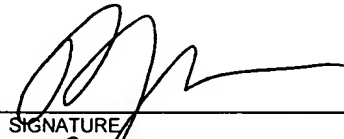
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- a. ☐ A check in the amount of \$ \_\_\_\_\_ to cover the above fees is enclosed.
- b. ☒ Please charge my Deposit Account No. 500715 in the amount of \$ 1000 to cover the above fees.  
 A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 500715. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**NOTE:** Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

Patrick J. Halloran, Ph.D., J.D.  
 3141 Muirfield Rd  
 Center Valley, PA 18034



SIGNATURE

Patrick J Halloran

NAME

41,053

REGISTRATION NUMBER